

Claims

What is claimed is:

1. A payment management system for obtaining approval of an electronic fund transfer disbursement file from a user of a remote system and transferring the electronic fund transfer disbursement file to a payments processor, the payment management system comprising:
  - an electronic transfer submission module for:
    - generating a digest by performing a hash on the electronic fund transfer disbursement file;
    - receiving an authorization response from the remote system; and
    - transferring an electronic funds submission to the payments processor, the electronic funds submission comprising the payment transaction file and at least a portion of the authorization response comprising a digital signature; and
  - a web server system for transferring authorization control code to the remote system, the authorization control code driving the remote system to perform the following steps:
    - obtaining the digital signature of authenticated attributes, the authenticated attributes including the digest; and
    - generating the authorization response, the authorization response including the digital signature.
2. The payment management system of claim 1:
  - wherein the authorization control code further provides for the remote system to:
    - generate additional message attributes; and
    - combine the additional message attributes with the digest to generate the authenticated attributes; and
  - the digital signature comprises a digital signature of a hash of the authenticated attributes.

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1 3. The payment management system of claim 2, wherein the authorization control  
2 code further drives the remote system to:

3 generate and pass a dummy data string to a signing component to obtain a  
4 dummy authentication data structure, the dummy authentication data structure  
5 comprising a dummy digital signature;

6 pass the authenticated attributes to the signing component to obtain the digital  
7 signature;

8 combine the digital signature with at least a portion of the dummy authentication  
9 data structure by replacing the dummy digital signature with the digital signature to  
10 generate an authentication data structure; and

11 include the authentication data structure in the authorization response.  
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1 4. The payment management system of claim 3, wherein:

2 the dummy data structure further comprises a dummy digest; and

3 the authorization control code further drives the remote system to combine the  
4 digest with the dummy authentication data structure to generate the authentication data  
5 structure by replacing the dummy digest with the digest.  
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1 5. The payment management system of claim 4, further comprising a log on  
2 module for authenticating the user of the remote system by:

3 obtaining logon credentials identifying the user of the remote system;

4 determining whether the logon credentials match those of an authorized user;

5 and

6 the electronic fund transfer submission module transfers the authorization  
7 request to the remote system only if the logon credentials match those of an authorized  
8 user.  
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1 6. The payment management system of claim 5, wherein the electronic fund

transfer submission module further authenticates the user of the remote system to the payments processor by:

- receiving an authentication challenge from the payments processor;
- transferring the authentication challenge to the remote system;
- receiving an authentication response from the remote system; and
- transferring the authentication response to the payments processor.

7. An payment management system for obtaining an approval of an electronic fund transfer disbursement file from a user of a remote system and transferring the electronic fund transfer disbursement file to a payments processor, the payment management system comprising:

- means for generating a digest by performing a hash on the electronic fund transfer disbursement file;
- means for transferring the digest to the remote system;
- means for receiving an authorization response from the remote system, the authorization response comprising a digital signature of authenticated attributes, the authenticated attributes comprising the digest; and
- means for transferring an electronic funds submission to the payments processor over a secure connection, the electronic funds submission comprising the payment transaction file and at least a portion of the authorization response comprising the digital signature.

8. The payment management system of claim 7, wherein the remote system comprises means for:

- generating additional message attributes; and
- combining the additional message attributes with the digest to generate the authenticated attributes; and
- the digital signature comprises a digital signature of a hash of the authenticated attributes.

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9. The payment management system of claim 8, wherein the remote system further comprises means for:
- generating and passing a dummy data file to a signing component to obtain a dummy authentication data structure, the dummy authentication data structure comprising a dummy digital signature;
  - passing the authenticated attributes to the signing component to obtain the digital signature;
  - combining the digital signature with at least a portion of the dummy authentication data structure by replacing the dummy digital signature with the digital signature to generate an authentication data structure; and
  - including the authentication data structure in the authorization response.
10. The payment management system of claim 9, wherein:
- the dummy data structure further comprises a dummy digest; and
  - the remote system further combines the digest with the dummy authentication data structure to generate the authentication data structure by replacing the dummy digest with the digest.
11. The payment management system of claim 10, further comprising means for authenticating the user of the remote system by:
- obtaining logon credentials identifying the user of the remote system;
  - determining whether the logon credentials match those of an authorized user;
  - and
  - transferring the authorization request to the remote system occurs only if the logon credentials match those of an authorized user.
12. The payment management system of claim 11, further comprising means for authenticating the user of the remote system to the payments processor by:

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receiving an authentication challenge from the payments processor;  
transferring the authentication challenge to the remote system;  
receiving an authentication response from the remote system; and  
transferring the authentication response to the payments processor.

13. The payment management system of claim 7, further comprising a web server for passing authorization control code to the remote system, the authorization control code being at least one of executable by the remote system and interpretable by the remote system for driving the remote system to:

generate additional message attributes; and  
combine the additional message attributes with the digest to generate the authenticated attributes; and  
the digital signature comprises a digital signature of a hash of the authenticated attributes.

14. The payment management system of claim 13, wherein the authorization control code further drives the remote system to:

generate and pass a dummy data file to a signing component to obtain a dummy authentication data structure, the dummy authentication data structure comprising a dummy digital signature;

pass the authenticated attributes to the signing component to obtain the digital signature;

combine the digital signature with at least a portion of the dummy authentication data structure by replacing the dummy digital signature with the digital signature to generate an authentication data structure; and

include the authentication data structure in the authorization response.

15. The payment management system of claim 14; wherein  
the dummy data structure further comprises a dummy digest; and

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the authorization control code further drives the remote system to combine the digest with the dummy authentication data structure to generate the authentication data structure by replacing the dummy digest with the digest.

16. The payment management system of claim 15, further comprising means for authenticating the user of the remote system by:

obtaining logon credentials identifying the user of the remote system;  
determining whether the logon credentials match those of an authorized user;

and

transferring the authorization request to the remote system occurs only if the logon credentials match those of an authorized user.

17. The payment management system of claim 16, further comprising means for authenticating the user of the remote system to the payments processor by:

receiving an authentication challenge from the payments processor;  
transferring the authentication challenge to the remote system;  
receiving an authentication response from the remote system; and  
transferring the authentication response to the payments processor.